Update as needed based on comments made to the DR Detention Basin Design Spreadsheet.

Remove "2" from all pages

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: Waterbury Filing No. 1 & 2 EDB Pond 1 D8 8

Facility Location & Jurisdiction: Stapleton Dr. & Bandernero Dr Intersection

User Input: Watershed Characteristics

Watershed Slope =	0.019	ft/ft
Watershed Length =	1250	ft
Watershed Area =	22.34	acres
Watershed Imperviousness =	51.9%	percent
Percentage Hydrologic Soil Group A =	100.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent

Location for 1-hr Rainfall Depths (use dropdown):

User Input

WQCV Treatment Method = Extended Detention

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	100	0.00	0.00
0.25	3,176	0.25	0.04
0.50	6,253	0.50	0.06
0.75	8,372	0.75	0.07
1.00	10,492	1.00	0.09
1.25	12,612	1.25	0.14
1.50	14,732	1.50	0.17
1.75	16,852	1.75	0.19
2.00	18,972	2.00	0.21
2.25	21,092	2.25	0.27
2.50	23,212	2.50	0.30
2.75	25,435	2.75	0.33
3.00	27,658	3.00	0.36
3.25	29,881	3.25	3.70
3.50	32,105	3.50	7.91
3.75	34,328	3.75	8.21
4.00	36,551	4.00	8.50
4.25	38,744	4.25	8.78
4.50	40,997	4.50	9.06
4.75	43,176	4.75	20.80
5.00	45,355	5.00	42.67
5.25	47,534	5.25	71.79
5.50	49,712	5.50	107.27
5.75	51,891	5.75	148.67
6.00	54,070	6.00	195.73
6.25	56,249	6.25	248.30
6.50	58,428	6.50	306.29

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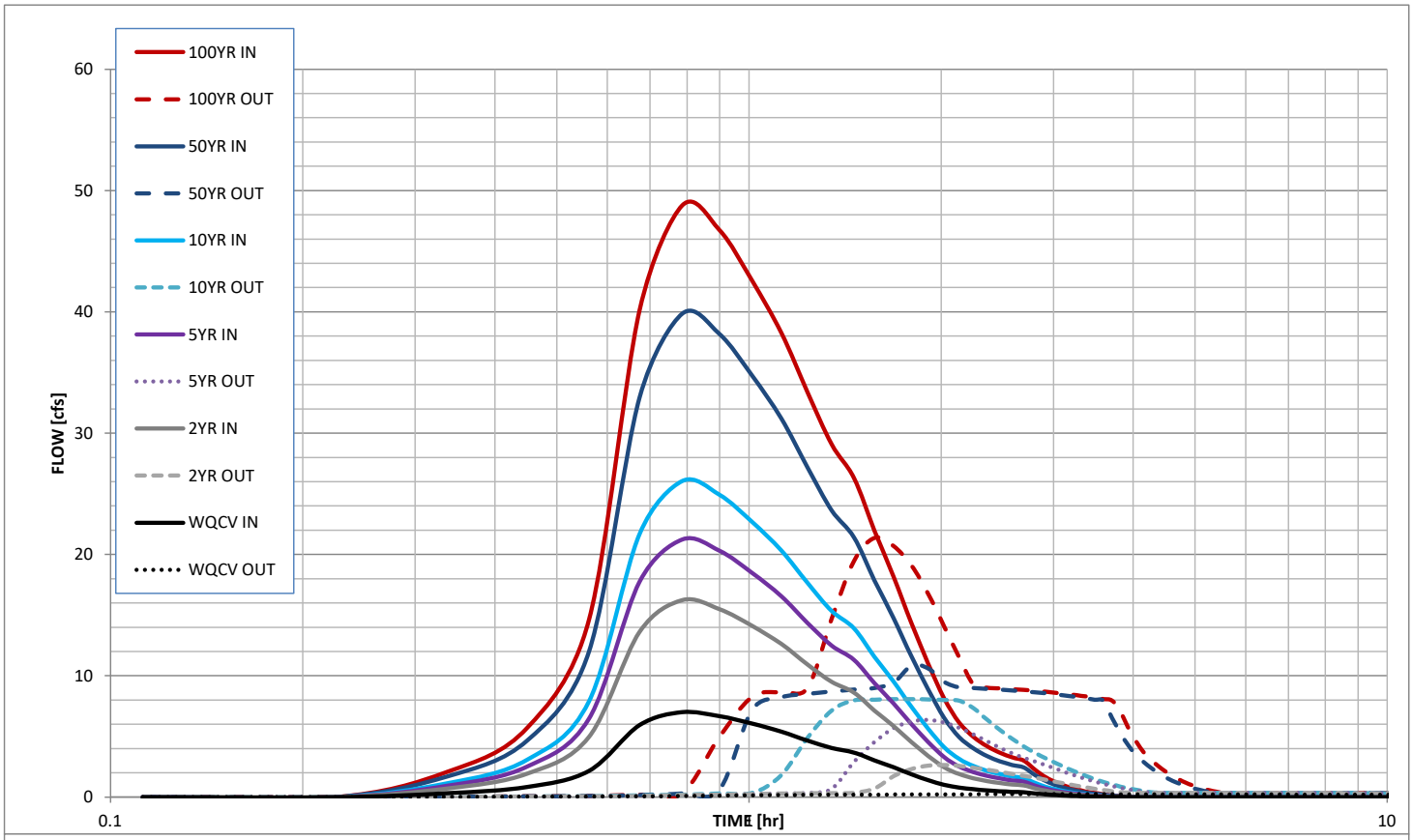
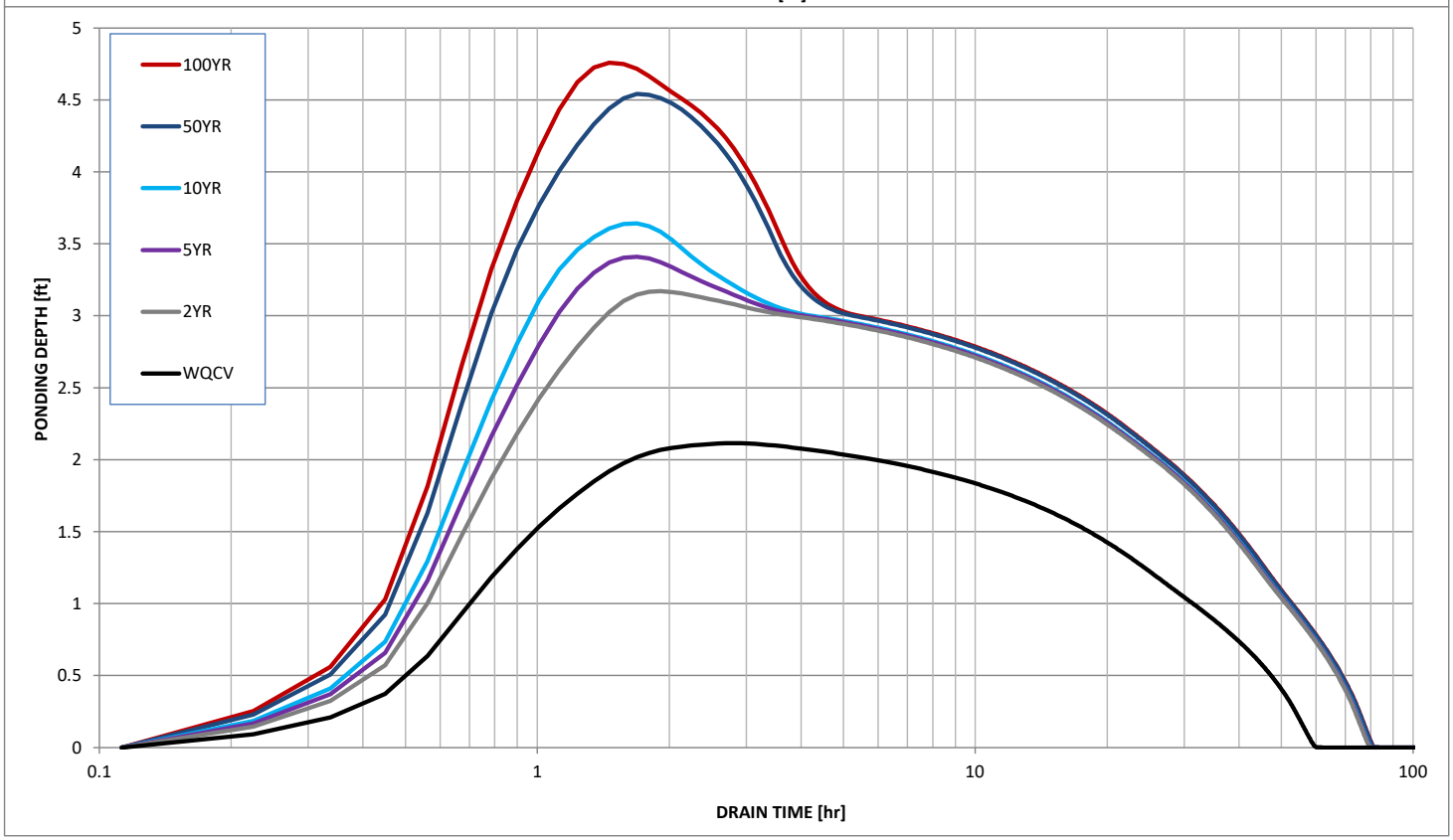
https://maperture.digitaldataservices.com/gvh/?viewer=cswdif
create a new stormwater facility, and
attach the pdf of this worksheet to that record.

Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	0.394	0.923	1.212	1.490	2.292	2.813	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.564	1.322	1.737	2.136	3.285	4.033	acre-ft
Time to Drain 97% of Inflow Volume =	51.7	66.5	**64.4**	62.4	57.5	54.4	hours
Time to Drain 99% of Inflow Volume =	55.2	72.6	71.7	70.9	69.3	**68.0**	hours
Maximum Ponding Depth =	2.11	3.17	3.41	3.64	4.54	4.76	ft
Maximum Ponded Area =	0.46	0.67	0.72	0.76	0.95	**0.99**	acres
Maximum Volume Stored =	0.520	1.112	1.281	1.450	2.219	2.434	acre-ft

Stormwater Detention and Infiltration Design Data Sheet





Stormwater Detention and Infiltration Design Data Sheet

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Stormwater Facility Name: Waterbury Filing No. 1 & 2 EDB Pond 2 DP 18

Facility Location & Jurisdiction: Stapleton Dr. & Bandernero Dr Intersection

User Input: Watershed Characteristics

Watershed Slope =	0.019	ft/ft
Watershed Length =	1050	ft
Watershed Area =	21.06	acres
Watershed Imperviousness =	25.8%	percent
Percentage Hydrologic Soil Group A =	100.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent

Location for 1-hr Rainfall Depths (use dropdown): User Input

WQCV Treatment Method = Extended Detention

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	100	0.00	0.00
0.25	942	0.25	0.02
0.50	1,784	0.50	0.03
0.75	2,626	0.75	0.04
1.00	3,468	1.00	0.04
1.25	5,034	1.25	0.07
1.50	6,600	1.50	0.09
1.75	8,166	1.75	0.10
2.00	9,732	2.00	0.11
2.25	11,297	2.25	0.14
2.50	12,863	2.50	0.16
2.75	14,429	2.75	0.17
3.00	15,995	3.00	0.18
3.25	19,602	3.25	3.05
3.50	23,209	3.50	10.28
3.75	26,815	3.75	10.76
4.00	30,422	4.00	11.17
4.25	34,029	4.25	11.57
4.50	37,636	4.50	11.96
4.75	41,243	4.75	12.33
5.00	44,850	5.00	12.70
5.25	48,650	5.25	20.77
5.50	52,450	5.50	35.88
5.75	56,251	5.75	56.20
6.00	60,051	6.00	81.25
6.25	63,851	6.25	110.80
6.50	67,652	6.50	144.75
6.75	71,452	6.75	183.06
7.00	75,252	7.00	225.73

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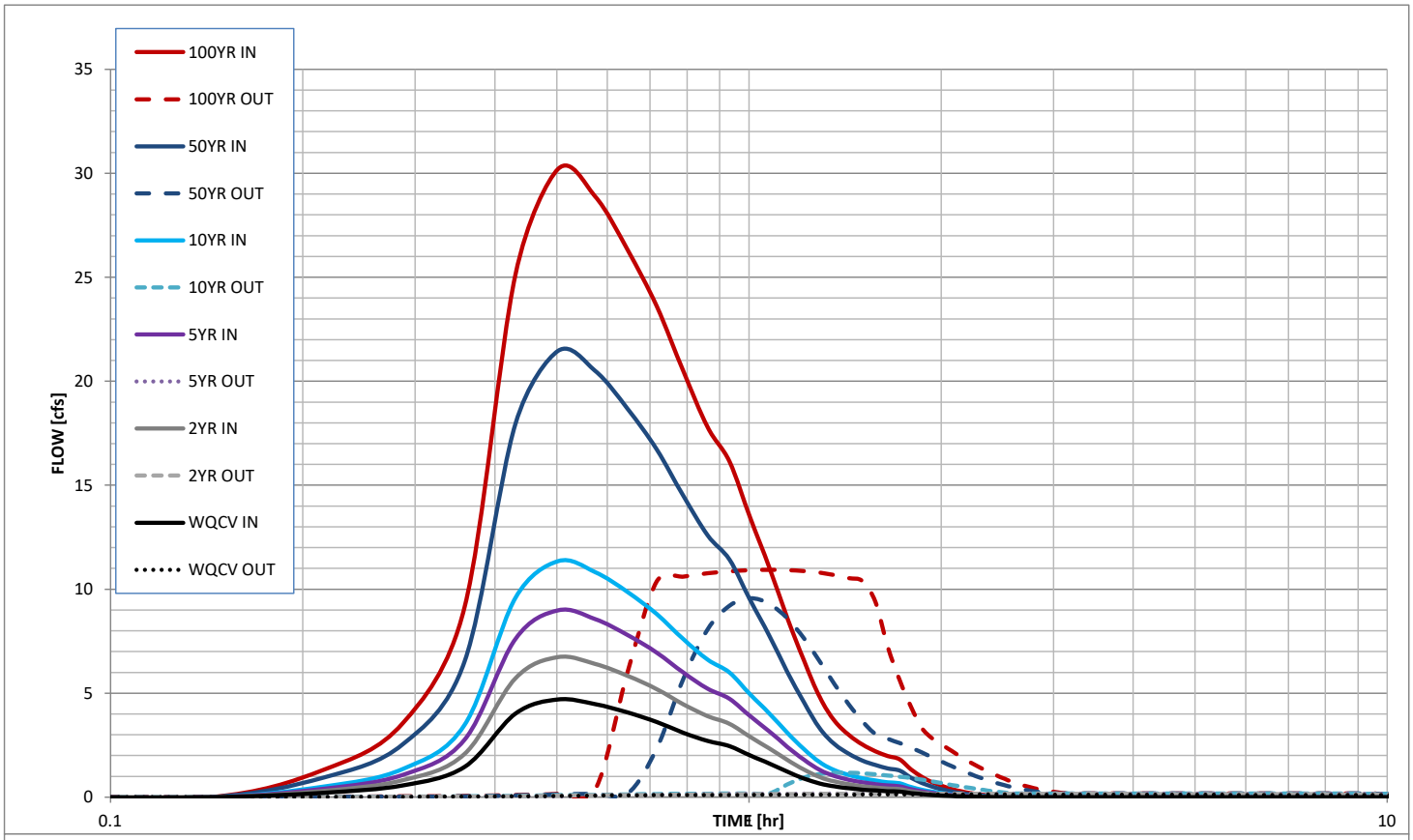
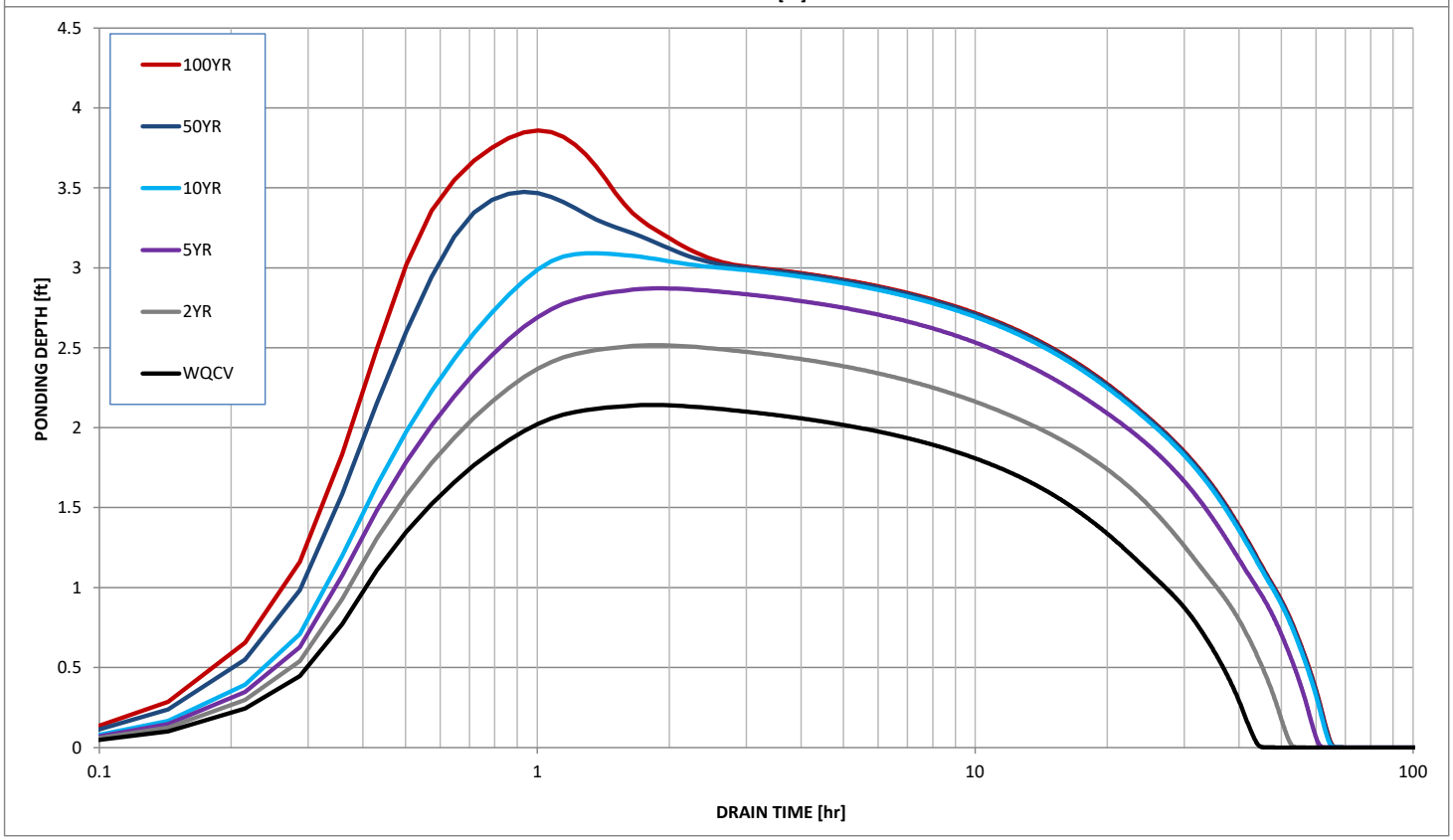
Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	0.241	0.347	0.464	0.589	1.120	1.583	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.241	0.346	0.464	0.588	1.120	1.583	acre-ft
Time to Drain 97% of Inflow Volume =	38.4	45.5	**52.4**	54.7	50.2	46.4	hours
Time to Drain 99% of Inflow Volume =	41.0	48.8	56.5	59.5	57.5	**56.0**	hours
Maximum Ponding Depth =	2.14	2.52	2.87	3.09	3.48	3.86	ft
Maximum Ponded Area =	0.24	0.30	0.35	0.39	0.52	**0.65**	acres
Maximum Volume Stored =	0.224	0.326	0.439	0.520	0.695	0.923	acre-ft

Stormwater Detention and Infiltration Design Data Sheet





Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: Waterbury Filing No. 1 & 2 EDB Pond 3 DP 29

Facility Location & Jurisdiction: Stapleton Dr. & Bandernero Dr Intersection

User Input: Watershed Characteristics

Watershed Slope =	0.022	ft/ft
Watershed Length =	1900	ft
Watershed Area =	82.44	acres
Watershed Imperviousness =	49.0%	percent
Percentage Hydrologic Soil Group A =	100.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent

Location for 1-hr Rainfall Depths (use dropdown):

User Input

WQCV Treatment Method = Extended Detention

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	100	0.00	0.00
0.25	2,785	0.25	0.10
0.50	5,470	0.50	0.14
0.75	8,155	0.75	0.18
1.00	10,840	1.00	0.20
1.25	13,525	1.25	0.23
1.50	16,210	1.50	0.25
1.75	18,895	1.75	0.37
2.00	21,580	2.00	0.43
2.25	26,334	2.25	0.48
2.50	31,088	2.50	0.53
2.75	35,842	2.75	0.57
3.00	40,596	3.00	0.60
3.25	45,530	3.25	0.73
3.50	50,105	3.50	0.81
3.75	54,895	3.75	0.87
4.00	59,613	4.00	0.93
4.25	62,301	4.25	0.98
4.50	64,989	4.50	1.03
4.75	67,677	4.75	4.39
5.00	70,365	5.00	14.71
5.25	73,504	5.25	28.91
5.50	75,742	5.50	46.13
5.75	78,430	5.75	60.71
6.00	81,118	6.00	62.35
6.25	82,113	6.25	74.47
6.50	83,503	6.50	111.77
6.75	84,696	6.75	163.81
7.00	85,888	7.00	227.74
7.25	87,081	7.25	302.17
7.50	88,274	7.50	386.27
7.75	89,466	7.75	479.48
8.00	90,659	8.00	581.41

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Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	1.398	3.156	4.151	5.117	8.003	9.913	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	1.397	3.155	4.151	5.111	7.999	9.910	acre-ft
Time to Drain 97% of Inflow Volume =	41.7	61.8	**62.5**	61.0	56.7	54.1	hours
Time to Drain 99% of Inflow Volume =	44.2	66.4	68.1	67.6	65.8	**64.7**	hours
Maximum Ponding Depth =	3.12	4.47	4.88	5.15	5.77	6.26	ft
Maximum Ponded Area =	0.98	1.48	1.58	1.66	1.80	**1.89**	acres
Maximum Volume Stored =	1.316	3.019	3.647	4.089	5.164	6.075	acre-ft

Stormwater Detention and Infiltration Design Data Sheet